RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: _10/518,432_
Source: _PU7/10_
Date Processed by STIC: _10/13/05_

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RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/518,432

DATE: 10/13/2005
TIME: 14:45:07

Input Set : A:\Sequence Lisitng-ST25.txt
Output Set: N:\CRF4\10132005\J518432.raw

```
      3 <110> APPLICANT: Massey University
      4         Institute Pasteur
      5         Murray, Alan
     ·6         Dupont, Christine
      8 <120> TITLE OF INVENTION: Immunogenic poly peptide isolated from Mycobacterium avium
      9         subspecies paratuberculosis and uses thereof
     11 <130> FILE REFERENCE: P70329US0
C--> 13 <140> CURRENT APPLICATION NUMBER: US/10/518,432
C--> 13 <141> CURRENT FILING DATE: 2004-12-20
     13 <150> PRIOR APPLICATION NUMBER: NZ 519667
     14 <151> PRIOR FILING DATE: 2002-06-19
     16 <160> NUMBER OF SEQ ID NOS: 9
     18 <170> SOFTWARE: PatentIn version 3.2
     20 <210> SEQ ID NO: 1
     21 <211> LENGTH: 235
     22 <212> TYPE: PRT
     23 <213> ORGANISM: Mycobacterium avium subspecies paratuberculosis
     25 <400> SEQUENCE: 1
     27 Met Gln Thr Arg Arg Arg Leu Ser Ala Val Phe Ala Ser Leu Thr Leu
     28 1               5                   10                  15
     31 Ala Thr Ala Leu Ile Ala Gly Cys Ser Ser Gly Ser Lys Gln Ser Gly
     32             20                  25                  30
     35 Ala Pro Leu Pro Asp Pro Thr Ser Leu Val Lys Gln Ser Ala Asp Ala
     36         35                  40                  45
    ·39 Thr Lys Asn Val Lys Ser Val His Leu Val Leu Ser Ile Gln Gly Lys
     40      50                  55                  60
     43 Ile Ser Gly Leu Pro Ile Lys Thr Leu Thr Gly Asp Leu Thr Thr Thr
     44 65                  70                  75                  80
     47 Pro Ala Thr Ala Ala Lys Gly Asn Ala Thr Ile Thr Leu Gly Gly Ser
     48             85                  90                  95
     51 Asp Ile Asp Ala Asn Phe Val Val Val Asp Gly Thr Leu Tyr Ala Thr
     52             100                 105                 110
     55 Leu Thr Pro Asn Lys Trp Ser Asp Phe Gly Lys Ala Ser Asp Ile Tyr
     56         115                 120                 125
     59 Asp Val·Ser Val Leu Leu Asn Pro Asp Asn Gly Leu Gly Asn Ala Leu
     60      130   ·   ,          135                 140
     63 Ala Asn Phe Ser Asn Ala Lys Ala Glu Gly Arg Glu Thr Ile Asn Gly
     64 145                 150               · 155                 160
     67 Gln Ser Thr Ile Arg Ile Ser Gly Asn Val Ser Ala Asp Ala Val Asn
     68             165                 170                 175
     71 Lys Ile Met Pro Gln Phe Asn Ala Thr Gln Pro Val Pro Ser Thr Val
     72             180                 185                 190
     75 Trp Val Gln Glu Thr Gly Asp His Gln Leu Val Gln Ala Asn Leu Gln
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76          195               200               205
79 Lys Ser Ser Gly Asn Ser Val Gln Val Thr Leu Ser Asn Trp Gly Glu
80     210               215               220
83 Gln Val Gln Val Thr Lys Pro Pro Val Ser Ser
84 225               230          .         235
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88 <211> LENGTH: 708
89 <212> TYPE: DNA
90 <213> ORGANISM: Mycobacterium avium subspecies paratuberculosis
92 <400> SEQUENCE: 2
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95 atcgccggct gctcgtcggg ctccaagcag agcggtgcgc cgctgcccga ccccaccagc   120
97 ctggtcaagc agtcggccga cgcgaccaag aacgtcaaga gcgtgcacct ggtgctcagc   180
99 atccagggca agatctccgg gctgcccatc aagacgctga ccggtgacct caccaccacg   240
101 ccggccaccg ccgcgaaggg caacgccacg atcaccctgg gcggctcgga catcgacgcc   300
103 aacttcgtcg tcgtcgacgg caccctgtac gccaccctca ccccgaacaa gtggagcgac   360
105 ttcggcaagg cgtccgacat ctacgacgtg tcggtgctgc tcaaccccga caacgggctg   420
107 ggcaacgcgc tggcgaactt cagcaacgcc aaggccgagg ccgcgaaac catcaacggt   480
109 cagagcacga tccggatcag cgggaacgtc tcggcggacg cggtgaacaa gatcatgccg   540
111 cagttcaacg ccacccagcc ggtgccgagc accgtgtggg tccaggagac cggcgaccac   600
113 cagctggttc aggccaacct gcagaagagc tccgggaatt ccgtgcaggt gacgctgtcg   660
115 aattggggcg agcaggtcca ggtcaccaag cccccggtga gctcgtga    .          708
118 <210> SEQ ID NO: 3
119 <211> LENGTH: 30
120 <212> TYPE: DNA
121 <213> ORGANISM: Artificial Sequence
123 <220> FEATURE:
124 <223> OTHER INFORMATION: Synthesized
126 <400> SEQUENCE: 3
127 gatgggatcc atgcagaccc gccgccgcct                                    30
130 <210> SEQ ID NO: 4
131 <211> LENGTH: 30
132 <212> TYPE: DNA
133 <213> ORGANISM: Artificial Sequence
135 <220> FEATURE:
136 <223> OTHER INFORMATION: Synthesized
138 <400> SEQUENCE: 4
139 tgagggtacc cgagctcacc gggggcttgg                                    30
142 <210> SEQ ID NO: 5
143 <211> LENGTH: 18
144 <212> TYPE: DNA
145 <213> ORGANISM: Artificial Sequence
147 <220> FEATURE:
148 <223> OTHER INFORMATION: Synthesized
150 <400> SEQUENCE: 5
151 tcgcgggact acggtgcc                                                 18
154 <210> SEQ ID NO: 6
155 <211> LENGTH: 18
156 <212> TYPE: DNA
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157 <213> ORGANISM: Artificial Sequence
159 <220> FEATURE:
160 <223> OTHER INFORMATION: Synthesized
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166 <210> SEQ ID NO: 7
167 <211> LENGTH: 6
168 <212> TYPE: PRT
169 <213> ORGANISM: Mycobacterium avium subspecies paratuberculosis
171 <400> SEQUENCE: 7
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177 <210> SEQ ID NO: 8
178 <211> LENGTH: 38
179 <212> TYPE: DNA
180 <213> ORGANISM: Artificial Sequence
182 <220> FEATURE:
183 <223> OTHER INFORMATION: Synthesized
185 <400> SEQUENCE: 8
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189 <210> SEQ ID NO: 9
190 <211> LENGTH: 39
191 <212> TYPE: DNA
192 <213> ORGANISM: Artificial Sequence
194 <220> FEATURE:
195 <223> OTHER INFORMATION: Synthesized
197 <400> SEQUENCE: 9
198 gggaattcca tatgtcacga gctcaccggg ggcttggtg                    39
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VERIFICATION SUMMARY   DATE: 10/13/2005
PATENT APPLICATION: **US/10/518,432**   TIME: 14:45:08

Input Set : **A:\Sequence Lisitng-ST25.txt**
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L:13 M:270 C: Current Application Number differs, Replaced Current Application No
L:13 M:271 C: Current Filing Date differs, Replaced Current Filing Date